

## **ABSTRACT**

An active filter circuit containing small capacitors. Due to the presence of such small capacitors, components such as PLL can potentially be integrated into integrated circuits. In an embodiment, the filter circuit is implemented by having a combination of a first capacitor and a first resistor connected in series providing the input signal to the input terminal of an operational amplifier, and a second resistor being connected in parallel to the combination. A second capacitor may be connected between the input and output terminals of the operational amplifier. The first capacitor may be chosen to be small by choosing the second resistor to be of a large resistance. Any noise introduced by such a large resistor may be attenuated by choosing the first resistor to be small.